Clean version of all pending claims:

1. (Amended) A method for modifying the function of a target receptor associated with a neurological disorder in a subject comprising:

inducing the presence of a therapeutically effective amount of an antigen in the circulatory system of the subject, wherein the antigen elicits the production of antibodies that, upon compromise of the blood-brain barrier, will pass into the central nervous system of the subject and bind to a target receptor located on a neuronal cell in the central nervous system of the subject and associated with a neurological disorder, and modify the function of the target receptor.

2. The method of claim 1, wherein the antibodies pass across the blood-brain barrier into the central nervous system facilitated by injury, disease or excessive neuronal activity.

3. The method of claim 1, wherein the neurological disorder is selected from the group consisting of epilepsy, stroke, Alzheimer's disease, Parkinson's disease, dementia, Huntington's disease, amyloid lateral sclerosis and depression.

5. The method of claim 1, wherein the neurological disorder is epilepsy.

6. (Amended) The method of claim 1, wherein the antigen present in the circulatory system of the subject is selected from the group consisting of neurotransmitters, neuroreceptors, transporters, ion channels, signal transduction molecules, enzymes involved in the synthesis or degradation of neurotransmitters, growth factors, transcription factors, and cell surface molecules.

7. The method of claim 6, wherein the antigen is an N-methyl-D-aspartate (NMDA) receptor.

8. The method of claim 7, wherein the antigen is N-methyl-D-aspartate receptor subunit 1 (NMDAR1).

C4 Sub D3

9. (Amended) The method of claim 1, wherein the presence of a therapeutically effective amount of the antigen in the circulatory system of the subject is induced by a vaccine selected from the group consisting of a viral vector vaccine, a DNA vaccine, a peptide vaccine and a crude antigen vaccine.

10. The method of claim 9, wherein the vaccine is a viral vector vaccine comprising a viral vector selected from the group consisting of an RNA viral vector and a DNA viral vector.

11. The method of claim 10, wherein the viral vector vaccine comprises a viral vector selected from the group consisting of an adenovirus vector, a herpes virus vector, a parvovirus vector, and a lentivirus vector.

12. The method of claim 11, wherein the viral vector is an adeno-associated virus vector.

C5 Sub D4

22. (Amended) A method for modifying the function of a target receptor associated with a neurological disorder in the central nervous system of a subject comprising:

inducing the presence of a therapeutically effective amount of an antigen in the circulatory system of the subject, wherein the antigen elicits the production of antibodies that, upon compromise of the blood-brain barrier, will pass into the central nervous system of the subject and bind to the target receptor located on a neuronal cell in the central nervous system and associated with a neurological disorder, and directly modify the function of the target receptor, or indirectly modify the function of a process involving the target receptor.

23. The method of claim 22, wherein the antibodies pass across the blood-brain barrier into the central nervous system facilitated by injury, disease or excessive neuronal activity.

C6 Sub D5

24. (Amended) The method of claim 22, wherein the target protein is selected from the group consisting of neurotransmitters, neuroreceptors, transporters, ion channels, signal transduction molecules, enzymes involved in the synthesis or degradation of neurotransmitters, growth factors, transcription factors and cell-surface molecules.

25. (Amended) The method of claim 22, wherein the antigen present in the circulatory system of the subject is selected from the group consisting of neurotransmitters, neuroreceptors,

transporters, ion channels, signal transduction molecules, enzymes involved in the synthesis or degradation of neurotransmitters, growth factors, transcription factors and cell surface molecules.

26. The method of claim 25, wherein the antigen is selected from the group consisting of an N-methyl-D-aspartate (NMDA) receptor, a glutamate receptor (GluR), an neuropeptide Y (NPY), galanin, an neurokinin-1 receptor (NK-1), a dopamine transporter and glutamic acid decarboxylase.

27. The method of claim 26, wherein the antigen is an N-methyl-D-aspartate (NMDA) receptor.

28. The method of claim 27, wherein the antigen is N-methyl-D-aspartate receptor subunit 1 (NMDAR1).

29. (Amended) The method of claim 22, wherein the presence of a therapeutically effective amount of the antigen in the circulatory system of the subject is induced by a vaccine selected from the group consisting of a viral vector vaccine, a DNA vaccine, a peptide vaccine and a crude antigen vaccine.

30 The method of claim 29, wherein the vaccine is a viral vector vaccine comprising a viral vector selected from the group consisting of an RNA viral vector and a DNA viral vector.

31. The method of claim 30, wherein the viral vector vaccine comprises a viral vector selected from the group consisting of an adenovirus vector, a herpes virus vector, a parvovirus vector, and a lentivirus vector.

32. The method of claim 31, wherein the viral vector is an adeno-associated virus vector.

36. (Amended) A method for modifying the function of a target receptor associated with cognition in the central nervous system of a subject comprising:

inducing the presence of a therapeutically effective amount of an antigen in the circulatory system of the subject, wherein the antigen elicits the production of antibodies that, upon compromise of the blood-brain barrier, will pass into the central nervous system of the subject

Sub A7 C8 Cont'd

and bind to the target receptor associated with cognition, and modify the function of the target receptor such that the modification of the target receptor improves cognition in the subject.

37. The method of claim 36, wherein the antibodies pass across the blood-brain barrier into the central nervous system facilitated by injury, disease or excessive neuronal activity.

C9 Sub D8

38. (Amended) The method of claim 36, wherein the antigen present in the circulatory system of the subject is selected from the group consisting of neurotransmitters, neuroreceptors, transporters, ion channels, signal transduction molecules, enzymes involved in the synthesis or degradation of neurotransmitters, growth factors, transcription factors and cell surface molecules.

39. The method of claim 38, wherein the antigen is an N-methyl-D-aspartate (NMDA) receptor.

40. The method of claim 39, wherein the antigen is N-methyl-D-aspartate receptor subunit 1 (NMDAR1).

C10 Sub D9

41. (Amended) The method of claim 36, wherein the presence of a therapeutically effective amount of the antigen in the circulatory system of the subject is induced by a vaccine selected from the group consisting of a viral vector vaccine, a DNA vaccine, a peptide vaccine and a crude antigen vaccine.

42. The method of claim 41, wherein the vaccine is a viral vector vaccine comprising a viral vector selected from the group consisting of an RNA viral vector and a DNA viral vector.

43. The method of claim 42, wherein the viral vector vaccine comprises a viral vector selected from the group consisting of an adenovirus vector, a herpes virus vector, a parvovirus vector, and a lentivirus vector.

44. The method of claim 43, wherein the viral vector is an adeno-associated virus vector.

C61 Sub D10

54. (Amended) A method for modifying the function of a target receptor associated with a neuroendocrine disorder in the central nervous system of a subject comprising:

inducing the presence of a therapeutically effective amount of an antigen in the circulatory system of the subject, wherein the antigen elicits the production of antibodies that, upon compromise of the blood-brain barrier, will pass into the central nervous system of the subject, and bind to the target receptor located on a neuronal cell in the central nervous system of the subject and associated with a neuroendocrine disorder, and directly modify the function of the target receptor, or indirectly modify the function of a process involving the target receptor.

59. (Amended) The method of claim 54, wherein the presence of a therapeutically effective amount of the antigen in the circulatory system of the subject is induced by a vaccine selected from the group consisting of a viral vector vaccine, a DNA vaccine, a peptide vaccine and a crude antigen vaccine.

60. The method of claim 59, wherein the vaccine is a viral vector vaccine comprising a viral vector selected from the group consisting of an RNA viral vector and a DNA viral vector.

61. The method of claim 60, wherein the viral vector vaccine comprises a viral vector selected from the group consisting of an adenovirus vector, a herpes virus vector, a parvovirus vector, and a lentivirus vector.

68. (Amended) The method of claim 54, wherein the target protein is selected from the group consisting of neurotransmitters, neuroreceptors, transporters, ion channels, signal transduction molecules, enzymes involved in the synthesis or degradation of neurotransmitters, growth factors, transcription factors and cell surface molecules.

70. (Canceled)

71. (Canceled)

72. (Canceled)

74. (Canceled)

75. (Canceled)

76. (Canceled)

86. (Amended) A method for modifying the function of an N-methyl-D-aspartate (NMDA) target receptor associated with a neurological disorder in a subject comprising:

inducing the presence of a therapeutically effective amount of an NMDA antigen in the circulatory system of the subject, wherein the antigen elicits the production of NMDA antibodies that, upon compromise of the blood-brain barrier, will pass into the central nervous system of the subject and bind to an NMDA target receptor located on a neuronal cell in the central nervous system of the subject and associated with a neurological disorder, and modify the function of the NMDA target receptor.

87. The method of claim 86, wherein the antibodies pass across the blood-brain barrier into the central nervous system facilitated by injury, disease or excessive neuronal activity.

88. The method of claim 86, wherein the neurological disorder is selected from the group consisting of epilepsy, stroke, Alzheimer's disease, Parkinson's disease, dementia, Huntington's disease, amyloid lateral sclerosis and depression.

89. The method of claim 86, wherein the neurological disorder is epilepsy.

90. The method of claim 86, wherein the NMDA antigen is N-methyl-D-aspartate receptor subunit 1 (NMDAR1).

91. (Amended) The method of claim 86, wherein the presence of a therapeutically effective amount of the antigen in the circulatory system of the subject is induced by a vaccine selected from the group consisting of a viral vector vaccine, a DNA vaccine, a peptide vaccine and a crude antigen vaccine.

92. The method of claim 91, wherein the vaccine is a viral vector vaccine comprising a viral vector selected from the group consisting of an RNA viral vector and a DNA viral vector.

93. The method of claim 92, wherein the viral vector vaccine comprises a viral vector selected from the group consisting of an adenovirus vector, a herpes virus vector, a parvovirus vector, and a lentivirus vector.

94. The method of claim 93, wherein the viral vector is an adeno-associated virus vector.

C16 SUB D15

95. (Amended) A method for modifying the function of a N-methyl-D-aspartate (NMDA) target receptor associated with a neurological disorder in the central nervous system of a subject comprising:

inducing the presence of a therapeutically effective amount of an NMDA antigen in the circulatory system of the subject, wherein the antigen elicits the production of NMDA antibodies in the circulatory system of the subject that, upon compromise of the blood-brain barrier, will pass into the central nervous system of the subject and bind to the target NMDA receptor located on a neuronal cell in the central nervous system and associated with a neurological disorder, and directly modify the function of the target NMDA receptor, or indirectly modify the function of a process involving the NMDA receptor.

96. The method of claim 95, wherein the antibodies pass across the blood-brain barrier into the central nervous system facilitated by injury, disease or excessive neuronal activity.

97. The method of claim 95, wherein the NMDA antigen is N-methyl-D-aspartate receptor subunit 1 (NMDAR1).

C17 SUB D16

98. (Amended) The method of claim 95, wherein the presence of a therapeutically effective amount of the antigen in the circulatory system of the subject is induced by a vaccine selected from the group consisting of a viral vector vaccine, a DNA vaccine, a peptide vaccine and a crude antigen vaccine.

99. The method of claim 98, wherein the vaccine is a viral vector vaccine comprising a viral vector selected from the group consisting of an RNA viral vector and a DNA viral vector.

100. The method of claim 99, wherein the viral vector vaccine comprises a viral vector selected from the group consisting of an adenovirus vector, a herpes virus vector, a parvovirus vector, and a lentivirus vector.

101. The method of claim 100, wherein the viral vector is an adeno-associated virus vector.

C18 SUB D17

102. (Amended) A method for modifying the function of a N-methyl-D-aspartate (NMDA) target receptor associated with cognition in the central nervous system of a subject comprising:

inducing the presence of a therapeutically effective amount of an NMDA antigen in the circulatory system of the subject, wherein the antigen elicits the production of NMDA antibodies that, upon compromise of the blood-brain barrier, will pass into the central nervous system of the subject and bind to the target NMDA receptor associated with cognition, and modify the function of the target NMDA receptor such that the modification of the NMDA receptor improves cognition in the subject.

103. The method of claim 102, wherein the antibodies pass across the blood-brain barrier into the central nervous system facilitated by injury, disease or excessive neuronal activity.

104. The method of claim 102, wherein the NMDA antigen is N-methyl-D-aspartate receptor subunit 1 (NMDAR1).

C19 SUB D18

105. (Amended) The method of claim 102, wherein the presence of a therapeutically effective amount of the antigen in the circulatory system of the subject is induced by a vaccine selected from the group consisting of a viral vector vaccine, a DNA vaccine, a peptide vaccine and a crude antigen vaccine.

106. The method of claim 105, wherein the vaccine is a viral vector vaccine comprising a viral vector selected from the group consisting of an RNA viral vector and a DNA viral vector.

107. The method of claim 106, wherein the viral vector vaccine comprises a viral vector selected from the group consisting of an adenovirus vector, a herpes virus vector, a parvovirus vector, and a lentivirus vector.

108. The method of claim 107, wherein the viral vector is an adeno-associated virus vector.